



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,563	12/30/2004	Ralph Mende	03100219AA	2829
30743	7590	02/27/2007	EXAMINER	
WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C. 11491 SUNSET HILLS ROAD SUITE 340 RESTON, VA 20190			GREGORY, BERNARR E	
		ART UNIT		PAPER NUMBER
				3662
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	02/27/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/519,563	MENDE, RALPH
	<b>Examiner</b> Bernarr E. Gregory	<b>Art Unit</b> 3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 15 December 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 12-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 12-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date: _____	6) <input type="checkbox"/> Other: _____

Art Unit: 3662

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In independent claim 12, the uses of the words "either," "or," and "may" in the description of the action of the recited "receiving antenna array" make the claim indefinite and unclear in that since the "reception signals" are described as definitely "being reflected" by "objects" which "may" be present in either of the recited reception areas, there is a question raised as to whether target reflections are received from areas outside of the two recited reception areas. A similar problem occurs in independent claims 18 and 22.

In each of dependent claims 19 and 23, the shorthand notation ">45°" is unclear in context. Each of these instances of the use of this shorthand must be corrected to recite what is intended by the shorthand in the English language.

Throughout claims 12-25, it is unclear in context what is meant by the "secondary radiation area" in that it would appear that it could describe a secondary lobe. Please see 37 CFR §1.75(d)(1).

Dependent claim 14 is unclear in that it is self-contradictory as to how an "array," which is by definition a plurality of antennae, can be a "single antenna." A similar problem occurs with dependent claim 13.

Dependent claims 13-17, 19-21, and 23-25 are unclear in that they respectively depend from unclear independent claims 12, 18, and 22.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 12, 15, 16, 18, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Agravante et al ('793) or Komatsu et al ('104) or Agravante et al ('011) or Wagner ('365) or Aoyagi et al ('571).

It is noted for the record that independent claims 12, 18, and 22 are written so broadly as to read on almost any radar that uses a separate transmitting array and receiving array. Each of the applied references has a transmitting array and a separate receiving array as recited in each of independent claims 12, 18, and 22. In that the Geometry of any conceivable area covered by the transmitted radar energy of any of the applied references would have a definite and significant width, such an area could be abstractly considered as two different radiation areas. Such an area would be within a certain angle relative to the transmitting and receiving arrays that would differ from the angle of the other radar energy area with respect to the same transmitting and receiving arrays. In that each of the applied references discloses a radar, any object present in either one of the radar energy areas

Art Unit: 3662

would be detected. Thus, the limitations of independent claims 12, 18, and 22 are fully met by each of the applied references.

The further limitations of dependent claim 15 are fully met by each of the applied references in that the language of claim 15 permits that each of the two antennae could receive return energy from both of the areas. Nothing in claim 15 states that one of the antennae only receives energy from one of the two areas.

The further limitations of dependent claim 16 are fully met by each of the applied references in that the relative sizes of the areas has no structural significance and in that the abstract conceptualization of the division of the radar energy areas could be in any desired ratio.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13, 14, 17, 19-21, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agravante et al ('793) or Komatsu et al ('104) or Agravante et al ('011) or Wagner ('365) or Aoyagi et al ('571).

One of ordinary skill-in-the-art would be a person possessing a graduate degree in Electrical Engineering or Physics with several years of experience in the design and/or use of radar systems.

Art Unit: 3662

Each of the applied references differs from the further limitations of dependent claims 13 and 14 in not showing the specific varieties of antennae recited in those claims. It would have been obvious to one of ordinary skill-in-the-art from the general disclosures in each of the applied references that any desired type of old and well-known radar antenna could be used in the systems disclosed in each of the applied references, including the types recited in dependent claims 13 and 14.

Each of the applied references differs from the further limitations of dependent claim 17 in not disclosing the use of the radar in relation to a "car" as recited therein. It would have been obvious to one of ordinary skill-in-the-art that each of the presence detection radars in the applied references could be used to radiate from a car as described in claim 17 in order to prevent collisions.

Each of the applied references differs from the further limitations of dependent claims 19-21 and 23-25 in that the specific angular orientations of the antenna arrays are not disclosed as variously set forth in dependent claims 19-21 and 23-25. It would have been obvious to one of ordinary skill-in-the-art from the general disclosures of each of the applied references that any orientation of the antenna arrays could be used as required by a particular use context (e.g., to prevent automobile collisions).

Art Unit: 3662

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

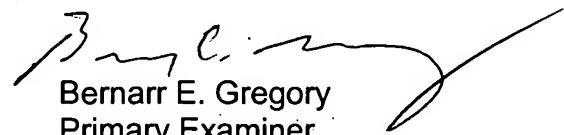
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernarr E. Gregory whose telephone number is (571) 272-6972. The examiner can normally be reached on weekdays from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarca, can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3662

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bernarr E. Gregory  
Primary Examiner  
Art Unit 3662